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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.      | CONFIRMATION NO.       |
|--|-------------|----------------------|--------------------------|------------------------|
| 10/731,632   | 12/09/2003  | Ashutosh K. Jha      | NVDA P001157             | 4721                   |
| 26291 7590 12/26/2007<br>PATTERSON & SHERIDAN L.L.P.<br>595 SHREWSBURY AVE, STE 100<br>FIRST FLOOR<br>SHREWSBURY, NJ 07702 |             |                      | EXAMINER<br>ROSE, KERRIM |                        |
|  |             |                      | ART UNIT<br>2616         | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>12/26/2007  | DELIVERY MODE<br>PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                               |                            |  |
|------------------------------|-------------------------------|----------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/731,632 | Applicant(s)<br>JHA ET AL. |  |
|                              | Examiner<br>Kerri M. Rose     | Art Unit<br>2616           |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 8-12, 15-17 and 19-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-12, 15-17 and 19-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/5/07; 11/15/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 9/25/2007 have been fully considered but they are not persuasive. Hayes discloses uploading a first frame to a buffer in the user's memory space (application program) or to a buffer in the operating system's memory (software driver) depending upon the processing in paragraph [0003].

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 8-12, 15-17, and 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Hayes (US 2003/0158906).

4. In regards to claims 1, 2, and 8 Hayes discloses processing data using an offload device in figures 7 and 12. As described in paragraph 38, if a special case is detected while processing, the offload device transfers the data to the CPU. The CPU then completes the processing using the TCP stack. Hayes discloses uploading a first frame to a buffer in the user's memory space (application program) or to a buffer in the operating system's memory (software driver) depending upon the processing in paragraph 3.

5. In regards to claims 3-5, Hayes discloses processing header data (IP) and payload data (TCP, which is considered part of payload) in paragraph 54.

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6. In regards to claims 9-12, Hayes discloses a system for offload processing in figure 7.

Figure 12 illustrates the steps taken by the system, such as determining if a special case exists and processing special cases by the TCP stack.

7. In regards to claim 15, Hayes discloses receiving additional frames while uploading processed frames. Frames will continue to be received unless the input buffer is full. Only then will incoming packets be denied, i.e. dropped. Therefore it is inherent that the offload processor will continue to receive frames that will wait processing while it completes processing of its current frame.

8. In regards to claims 16 and 17, Hayes discloses a method for offload processing. As shown in figure 12 portions of the received data are evaluated. Depending upon certain conditions the data are sent to different areas for complete processing.

9. In regards to claims 19 and 20, Hayes discloses updating connection state information in paragraphs 57 and 67.

10. In regards to claim 21, Hayes discloses further comprising issuing an interrupt to the CPU after the second processed frame data is uploaded to the legacy buffer. Computers are interrupt driven and it is therefore inherent that an interrupt would be issued.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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12. Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayes (US 2003/0158906).

13. In regards to claims 22 and 23, Hayes discloses user and legacy buffers, but not wherein the buffers are physically contiguous memory locations.

It was known by those of ordinary skill in the art to allocate physically contiguous memory locations.

It would have been obvious to one of ordinary skill in the art to allocate physically contiguous locations to the buffers taught by Hayes because it is preferable to have contiguous memory when dealing with large amounts of money for cache and memory access latency reasons.

14. In regards to claims 24 and 25, Hayes discloses user and legacy buffers, but not wherein the buffers are physically non-contiguous memory locations.

It was known by those of ordinary skill in the art to allocate physically non-contiguous memory locations.

It would have been obvious to one of ordinary skill in the art to allocate non-contiguous locations to the buffers taught by Hayes because fragmentation problems may prevent contiguous locations and virtual memory can simulate contiguous memory.

### ***Conclusion***

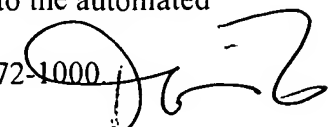
15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kerri M. Rose whose telephone number is (571) 272-0542. The examiner can normally be reached on Monday through Thursday, 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H. To can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



DORIS H. TO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

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